

DATA REQUEST : DEAN RICH

DR-1.7

Please provide a copy of all written and electronic documents, including reports, drawings, memoranda, notes and letters, which support Mr. Rich's assertion, on lines 6 and 7, page 5, O'Fallon Ex. 2.0, that St. Louis has excess capacity and would like to have O'Fallon's business.

ILL. C. C.

1AWC

5/2/03

ORIGINAL FILE

02-6690

DR-2

CD

Dean Rich
Director of Finance
City of O'Fallon
618 624-4500 ext. 1110



City of St. Louis Water Division

**Serving St. Louis
For 160 Years**

Purification Center

The Chain of Rocks Plant is located on the Mississippi River about eleven miles north of the center of the City and about five miles south of the confluence of the Missouri and Mississippi Rivers. This plant was first used in 1894.

Many improvements have been added since the late 1800s. The river water flows into three intake towers: two are located in the river channel, and one is on the shore. The three intake towers make it possible to receive primarily Missouri River or Mississippi River water or a combination from the two rivers. This is advantageous when there is an isolated problem on either of the two rivers.

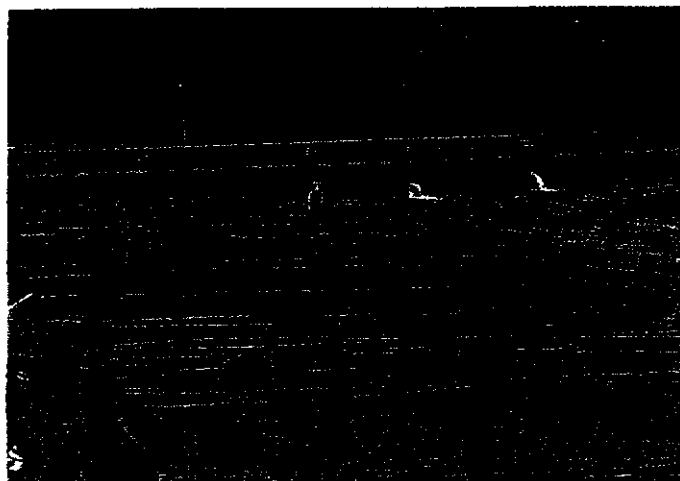
The water flows by gravity through tunnels cut out of solid rock to the Low Service Pumps. The water is then lifted approximately fifty feet to the treatment basins. The Low Service Pumping Station has ten electric pumps. Two of the

pumps are rated at twenty-five and eight at fifty million gallons per day for a total of 450 M.G.D. (Million Gallons per Day).

The first basin the water enters is the Pre-Sedimentation Basin, where the coarse sand and heavy suspended silt settle out. This settling is assisted by the addition of a cationic polyelectrolyte.

Chlorine is added to disinfect the river water and to oxidate odorous materials. Ammonium hydroxide is then added to produce a combined available chlorine residual and to control formation of the trihalomethanes.

Lime is then added to reduce the hardness of the water. The reduction of hardness is accomplished primarily by the



Settling Basins No. 1 is cleaned periodically of sediment and mud.

removal of calcium carbonate. This precipitate enmeshes and collects bacteria and silt particles and causes them to settle out.

The addition of lime also raises the pH of the water, making it less corrosive. This is important in insuring that the water will not leach lead or copper out of the pipes and faucets in our customers homes.

The water subsequently passes through five sets of basins called Primary Sedimentation, becoming clearer as the silt continues to settle out.



Chemicals Plant houses all stored chemicals used in the treatment purification. Ammonia, Chlorine, Fluoride, Iron, Carbon, Polymer and Lime.

Pumping Facilities

The treatment facilities of the Chain of Rocks Pumping Plant are divided into the Primary Station, which raises river water from the three intakes to the basins, and the Distributive Station, which takes the treated water from the clearwell and pumps it directly into the Compton Hill and Stacy Park distributive systems through three 78-inch steel and concrete-encased conduits. Each pumping station houses ten pumps and motor units.

All twenty of the pump motors are horizontal, high speed, synchronous machines with direct connected exciters designed to operate at unity power factor at 4160 volts with a full complement of protective relays. The Primary pump motors are air-cooled and have antifriction bearings, while the Distributive pump motors are water-cooled and have split babbit bearings.

In the Primary Station, the pump discharge valves are DC operated hydraulic butterfly valves. The suction and discharge piping valves are AC-operated hydraulic gate valves. Water from the plant service lines is used as the working fluid. The discharge valves in the Distributive Station are cone valves. Butterfly valves are used for the suction and for all of the piping valves. All of the valves in the Distributive Station have DC controls and DC motors.

The plant draws all of its electrical power from Union Electric. Two separate 34.5KV feeders service the plant, traveling by different routes until one mile south of the plant grounds. At that location, one of the feeders is laid underground until it reaches the plant. The Water Division substation contains four 7500 KVA, 34.5 to 4.16 KV 3 phase standard transformers. Each building has its own 4160 to 440 or 208 volt transformers for auxiliary loads.

In the Primary and Distributive Stations there are 60 cell 132 V battery systems. These supply power for the substation and pump motor circuit breaker controls, as well as power and control for the valves and emergency lighting.

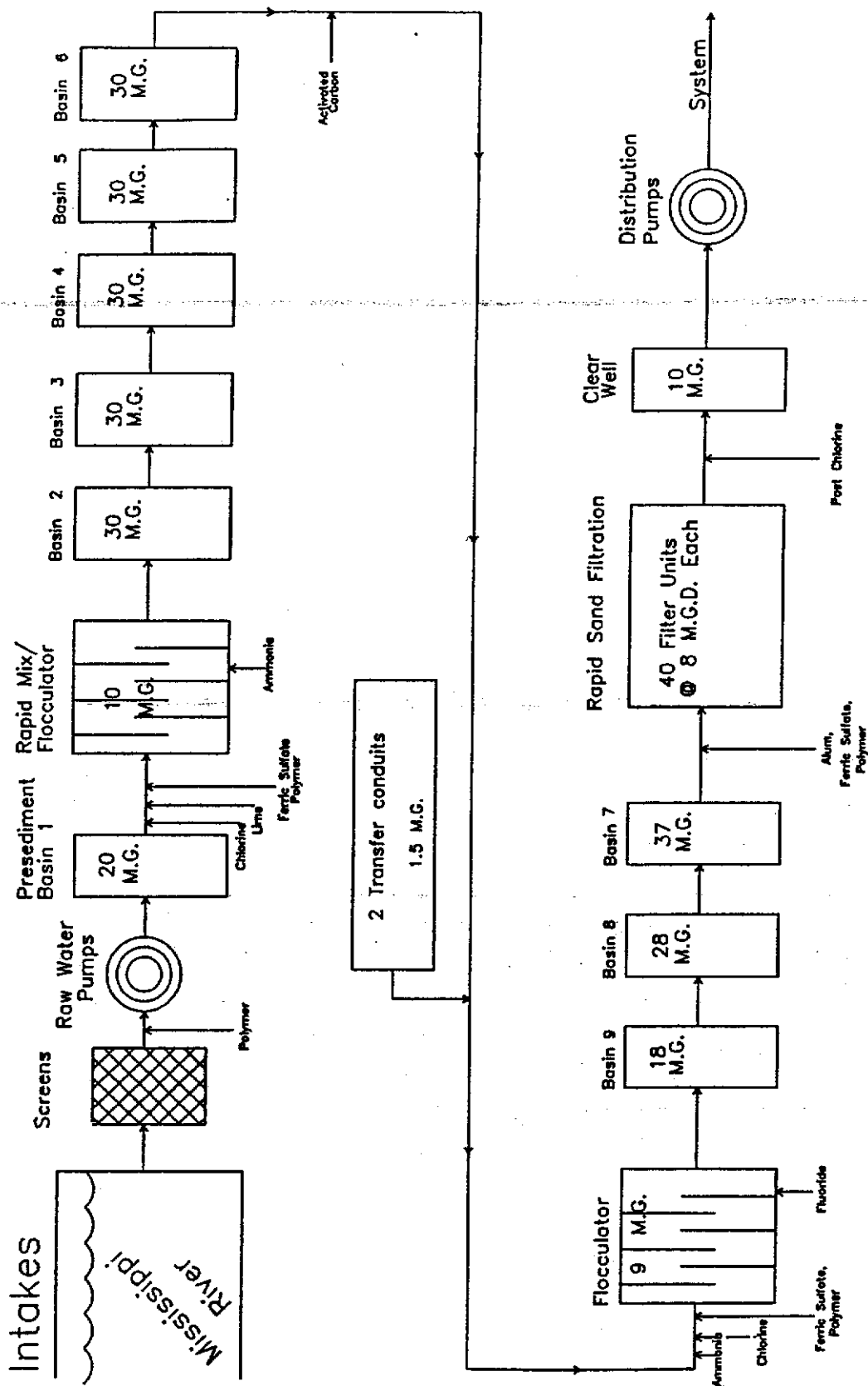
The Head House located on the Chain of Rocks grounds houses the laboratory, engineering offices and back washing tanks.

Inside the Distributive Station control room are sixteen key pressure points which are monitored. The engineer on watch can operate 13 monitored valves in the distribution system to control the pressures throughout the city. Stand-by AC generating capacity is available to keep the telemetering system functioning in case of power outage in the station.



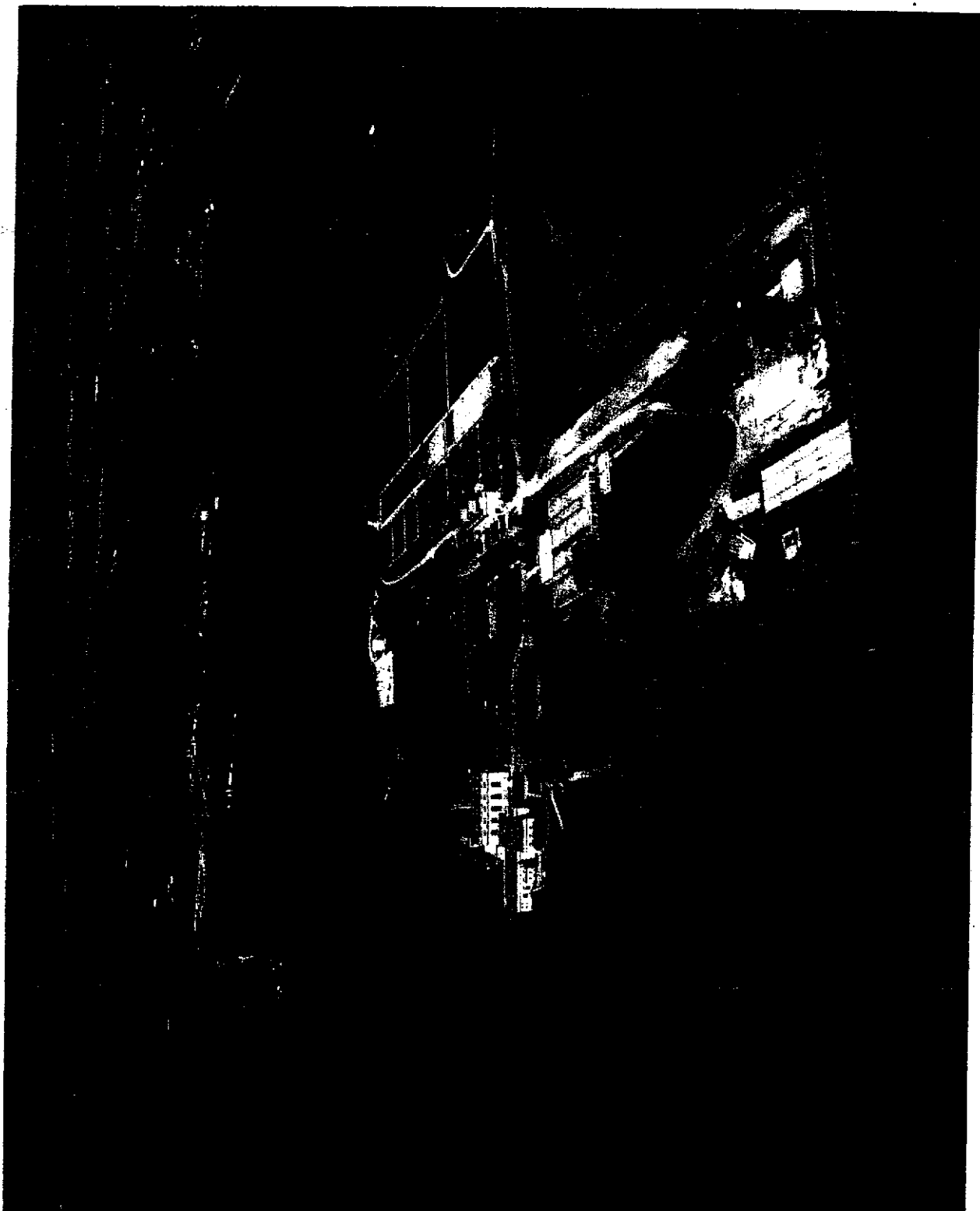
Pumping Station

Typical Process Train, ST.Louis,MO. Water Division



Schematic of Chain of Rocks Plant Illustrated
Process Train Duplicated at the Howard Bend Plant

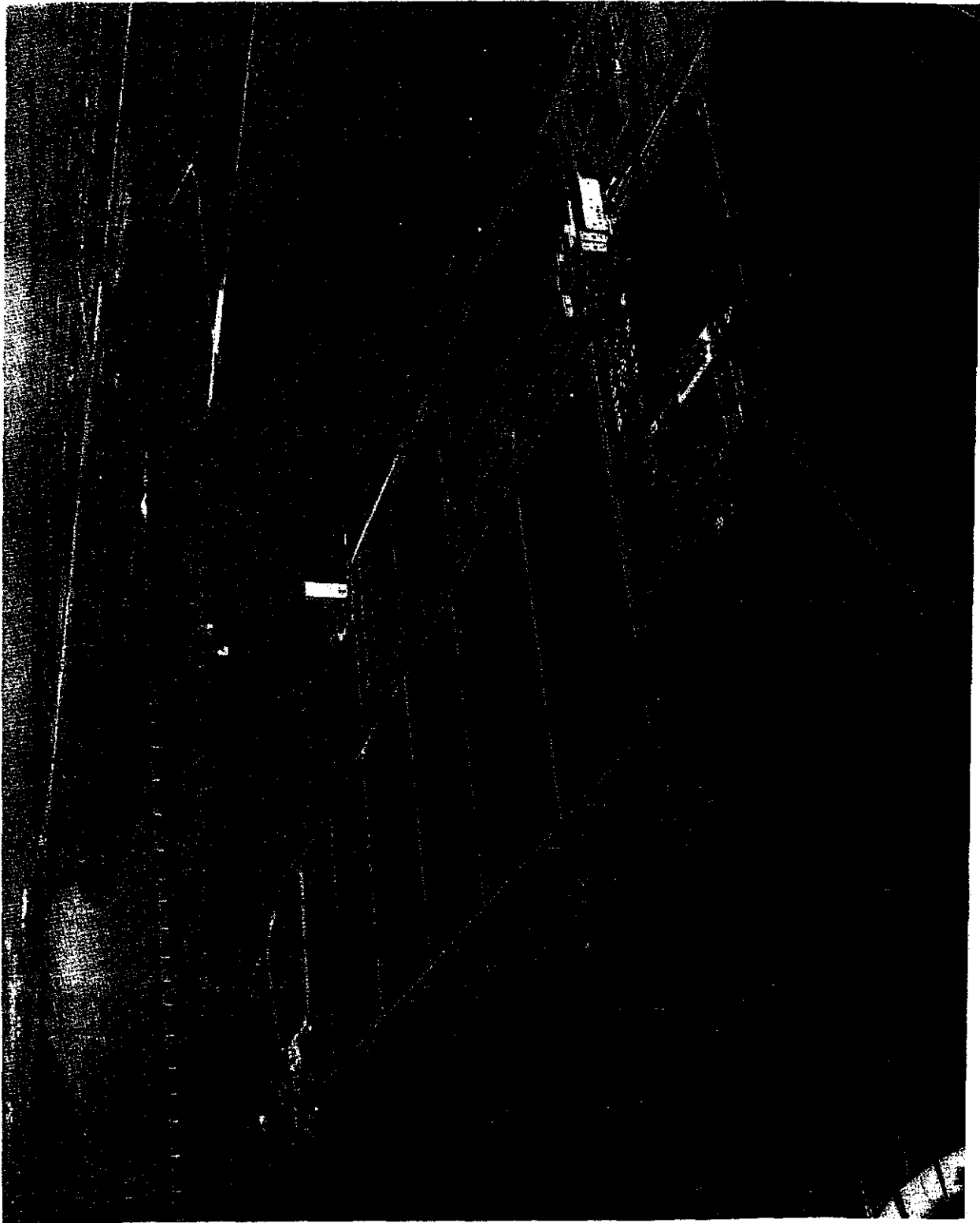
DWG By H.A.C.



Howard Bend Water Production Plant Flood 1993



Howard Bend Water Production Plant



Chain of Rocks Water Production Plant

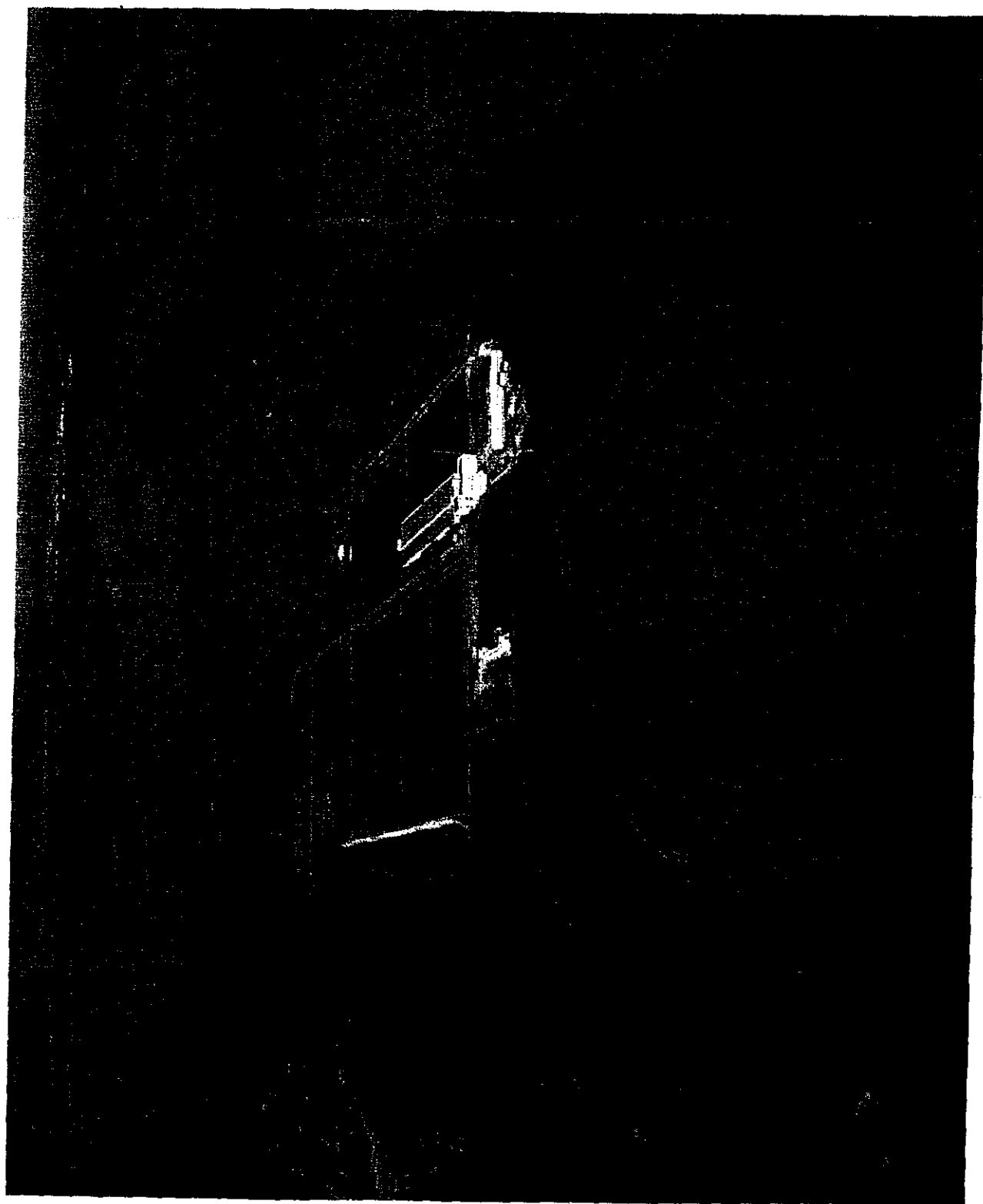


There's a lot more to drinking water than meets the eye.

The Water Facts of Life

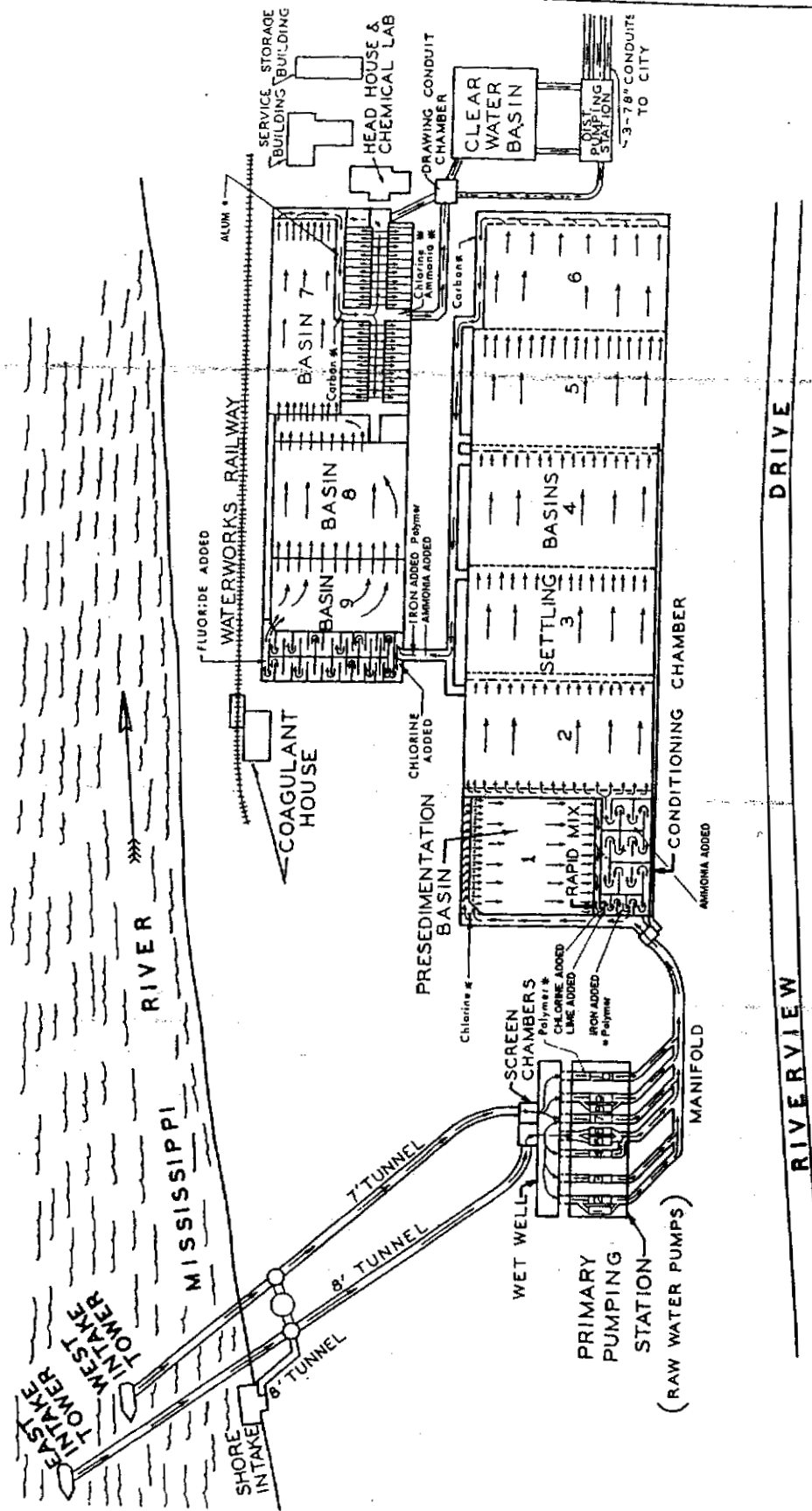
Did You Know?

1. There is the same amount of water on Earth today as there was 3 billion years ago.
2. Three percent of the water on Earth is freshwater and only 1% is available for human consumption.
3. Sixty-six percent of a human being is water.
4. Seventy-five percent of the human brain is water.
5. Seventy-five percent of a living tree is water.
6. You could survive about a month without food, but only 5 to 7 days without water.
7. On the average, each American uses about 160 gallons of water a day at a cost of 27 cents.
8. Bottled water may cost up to 1000 times more than municipal drinking water and may not be as safe.
9. Two-thirds of the water used in an average home is used in the bathroom.
10. Typically 4 to 6 gallons of water are used for every toilet flush.
11. On the average, a person uses 2 gallons of water to brush his or her teeth each day.
12. A 10-minute shower uses about 55 gallons of water.
13. A leaking faucet can waste up to 100 gallons of water a day.
14. The average person spends less than 1% of his or her total personal expenditure dollars for water, waste water, and water disposal services.
15. There are about 60,000 community water suppliers in America.
16. Public water supplies must meet or exceed Environmental Protection Agency standards. Many public water supplies consistently supply water that is much better than the minimum standards.



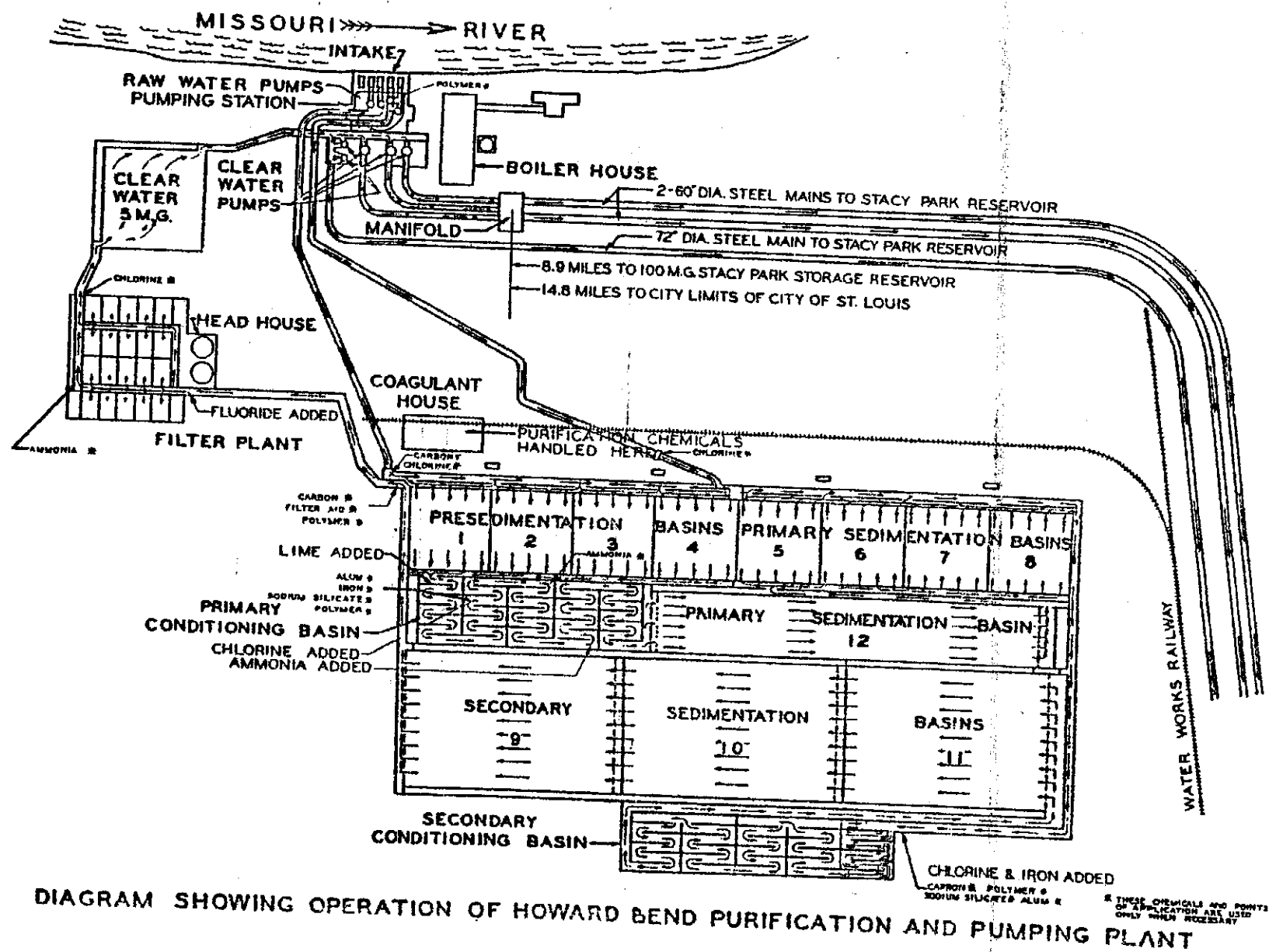
Chain of Rocks Water Production Plant Flood 1993

Chain of Rocks Water Production Plant Diagram



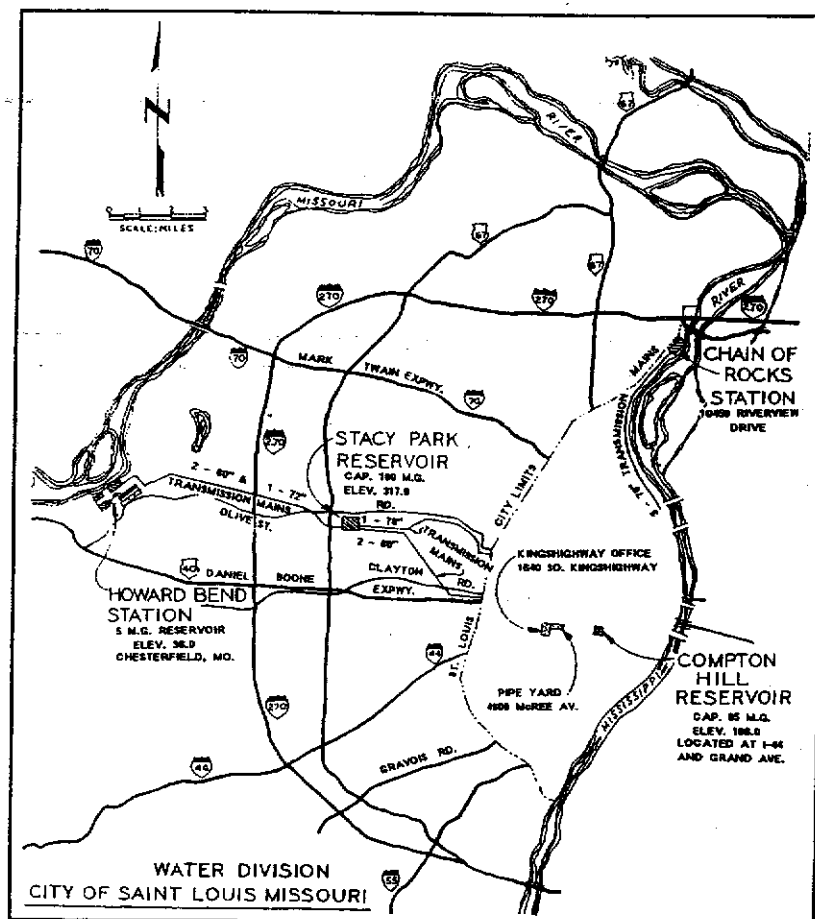
* These Chemicals And Points Of Application Are Used Only When Necessary

DIAGRAM SHOWING OPERATION OF CHAIN OF ROCKS PURIFICATION AND PUMPING PLANT





Control Panel, Distributive Station



Map showing the locations of the Howard Bend and Chain of Rocks Water Production Plants

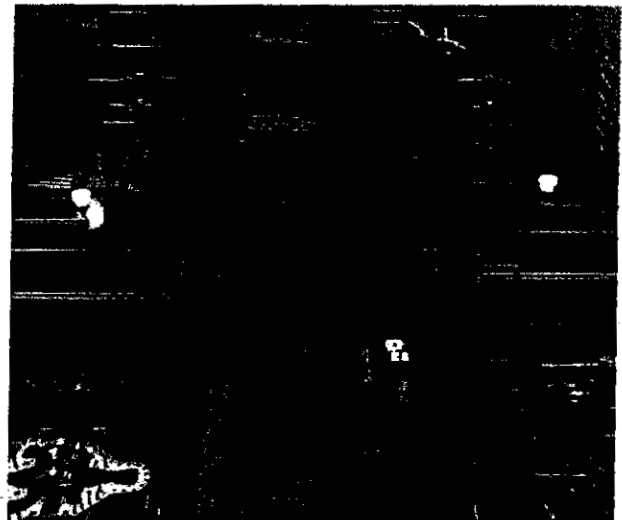
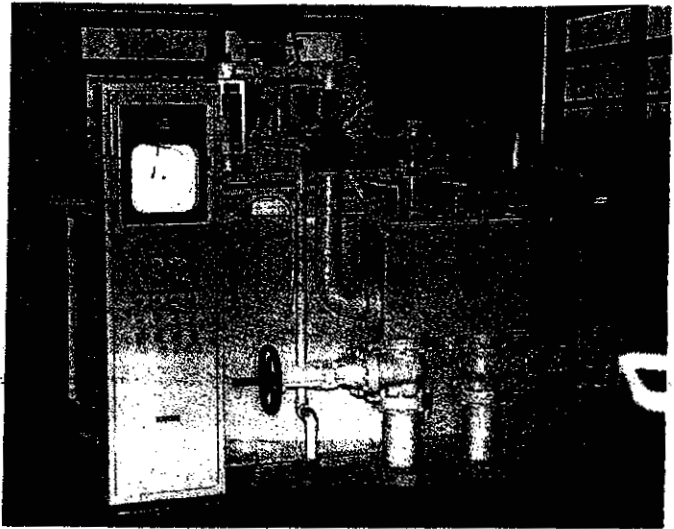
Tours

Tours are conducted for schools, adult groups, and other community groups upon request.

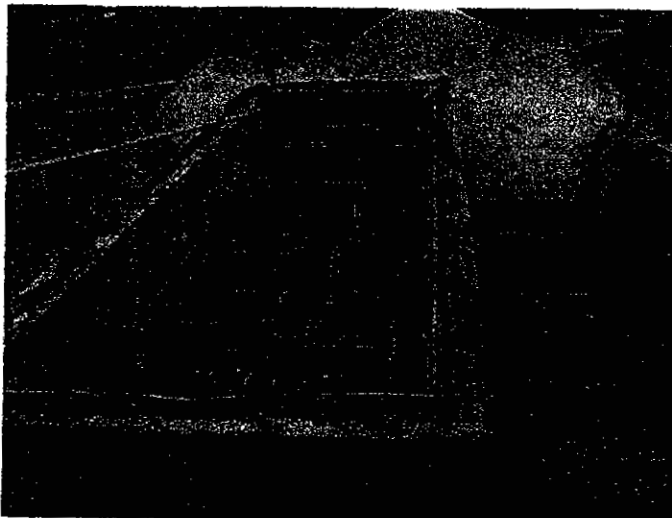
For additional information, call 314-868-5640.

Lime Slakers.

Lime is mixed with water to soften it and remove suspended particles.



Distributive Building housing pumping facilities to supply water to the City of St. Louis.



Meter Chamber - Connecting meters from the Howard Bend, Water Treatment Plant to St. Louis County Water System.

The water then receives a second treatment consisting of chlorine and ammonium hydroxide, which enmeshes additional colloidal particles.

Next the water passes through three more basins in series. Ferric sulphate and polymers are added to aid coagulation when necessary. Hydrofluosilicic acid is added to the water in order to adjust the fluoride content to one part per million, which aids in the reduction of tooth decay.

At various locations in the plant, powdered activated carbon can be added for taste and odor control. Taste and odor problems are typically at their worst in the spring following the heavy rains.

The final step in the water treatment process, "filtration", is a polishing step. Any minute traces of silt or suspended matter are removed.

The Filter Plant contains forty filters. Each filter is 1400 square feet, and is capable of filtering eight million gallons of water per day, for a total capacity of 320 M.G.D. The filter beds consist of 30 inches of sand supported by 12 inches of gravel.

After filtration, the water goes to a fifteen million gallon storage reservoir. From here it is pumped to the City mains. The finished water pumping station has ten electric pumps. Four units pump 50 MGD at 85 psi for the Low Pressure System, three units pump 59 MGD at 115 psi for the High Pressure System,

and three units pump 36 MGD at 85 psi or 30 MGD at 115 psi and are used for either pressure system.

The water takes one to three days to pass through the treatment plant. During this time an average of 310 tons of mud and scale forming solids are removed each day.

Approximately forty million bacteria are removed from each gallon of river water. Forty-six percent of the hardness of the river is removed, and

complete disinfection is achieved in the 50 billion gallons of water delivered yearly to the consumer's tap.

In the five year period from 1900 to 1904, there were 1100 deaths due to Typhoid Fever, in a city with an approximate population of 400,000. With the introduction of chemical treatment and other sanitary measures and constant checks (about 7000 samples per year collected from taps in various parts of the City), the typhoid rate has been reduced to zero.



Chain of Rocks Laboratory

Laboratories

The St. Louis Water Division maintains laboratories at both water treatment plants with the central lab at the Chain of Rocks Plant dedicated to trace metal analysis and gas chromatography for pesticide contamination.

The laboratories at both treatment plants are State certified and E.P.A. certified for bacteriological testing and all other testing mandated by the Federal Safe Drinking Water Act.

General Information

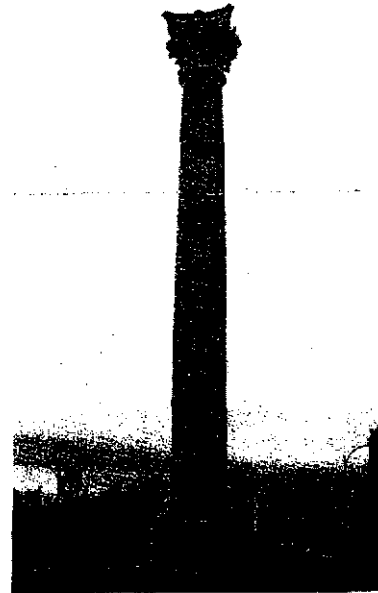


Bissell Street Water Tower

The City of St. Louis is approximately thirteen miles long and five miles wide and has 1,370 miles of water pipe under it.

The smallest pipe is four (4) inches in diameter; the largest is eighty-four (84) inches. Because of the tremendous flow of the Mississippi River, two minutes intake per day provides the City of St. Louis an adequate supply of drinking water.

Approximately 5,500 pounds of chemicals are on hand at all times for use in purifying and disinfecting the water. Enough mud is removed from the river water each year to fill 250 average-size homes.



North Grand Water Tower

History

The City of St. Louis was founded in 1764. For sixty-seven years thereafter, the city water supply was obtained from wells, springs, and the Mississippi River.

In 1829, when the population of St. Louis was approximately 5,000, the City contracted with John C. Wilson and Abraham Fox to construct and operate a waterworks. Revenue from the sale of water was to be collected for a period of twenty-five years, after which the plant would become the property of the City. The waterworks was completed in 1831.

During the building of the plant, the contractor had financial difficulties, causing him to sell three-quarters interest in the water plant. In 1835 the City acquired the remaining one-quarter interest. From that date to the present, the plant has been a municipally-owned utility.

The Water Division system today is comprised of the Howard Bend Plant on the Missouri River, the Chain of Rocks Plant on the Mississippi River, and the Pipe Yard Complex at Kingshighway and McRee Avenue, which also houses the Kingshighway Office and the Water Commissioner's Office.



Compton Hill Water Tower



City of St. Louis

Water Division

FOCUS | O'Fallon considers dropping Illinois-American and

Continued from Page 1B

new \$38 million water treatment facility in Alton.

"Our rates did not increase for three years. Not many businesses can say their price remained the same for three years straight. Not many communities can say they did not raise taxes or raise fees for three years," Illinois American spokesman Terry Mackin said.

"We do everything we can to hold down costs while reinvesting in our water system. But we can't and won't ignore the needs of our own water system. Ignoring infrastructure needs only causes service problems.

"Another very important fact to point out is that our wholesale customers pay considerably less for water than residential customers," Mackin said. "That's because of the volume of water they use, and it costs us less to serve them."

For example, O'Fallon customers pay about 57 cents a day, based on a usage of 200 gallons a day, or about \$17 a month, compared with 97 cents a day, or about \$29 a month, for Belleville residents for the same amount of water.

It was around the time that wholesale rates jumped dramatically that Cahokia and Columbia joined forces and signed a contract with St. Louis' water company. Even though the pipes have not been laid to fulfill that contract, it was a powerful negotiating tool that got Illinois-American's attention.

Cahokia and Columbia now are buying water at 96 cents per 1,000 gallons, the smallest amount anyone pays Illinois-American for water in the metro-east.

O'Fallon might be following the same path.

O'Fallon's city administra-

tor, Craig Owens, said the city's feasibility study for piping water from St. Louis is finishing now, and a decision should be made by the city within a few months.

"O'Fallon is the biggest wholesale customer that Illinois-American has," Owens said. "We are taking a very strategic look at the most efficient way to provide reliable water service to the residents and businesses we serve."

The St. Louis Water Department built its Chain of Rocks plant, south of Interstate 270, to ensure water quality for the 1904 World's Fair, according to the Missouri Historical Society.

The plant was a large undertaking planned for a growing city. But industry left, the population declined and the St. Louis Water Company has never reached its full capacity.

"The (St. Louis) system was designed for a much larger population, more than we have ever had in the city," said spokesman Jim Kummer said. "We still have enough excess capacity that we could provide for some other entities."

Rich said that is what makes buying water from St. Louis appealing.

"Over in St. Louis, they've got so much water, they don't know what to do with it," Rich said. "The residents don't pay hardly anything over there. St. Louis has got a huge advantage because they have that big plant that's been paid for for years and years."

St. Louis customers pay a

flat fee of \$15.30 a month for unlimited water usage, compared with the \$17 a month that O'Fallon residents pay for about 6,000 gallons.

Kummer said he has met with O'Fallon officials about the subject.

"We are always looking for new customers, and they are a

good fit to us as a wholesale supplier," he said.

Territorial battle

O'Fallon officials are livid that Illinois-American is asking the ICC for an extension of its water service toward the O'Fallon city limits.

"Every time the city tries to work with (Illinois-American), they turn around and reward us with a huge rate increase or a land grab," Rich said.

The plan would run new water lines north along Green Mount Road and under Interstate 64 to Carr Street. The 30-acre site is in the Regency Park development area.

"This is not about providing water to an unserved area," Rich said. "It's about hijacking water service to a prime piece of O'Fallon territory."

Mackin said the developer of the land came to Illinois-American after O'Fallon informed him he would have to sign an annexation agreement to get water service from the city. Mackin said the developer does not want to be annexed.

"Fact is, if the developer chooses to annex into the city, we are not involved. He came to us. We didn't go to him. By law, we can not turn our backs

on him," Mackin said. "We have to proceed through commission (ICC), and this area being developed quickly puts us in a difficult situation with one of our large customers, O'Fallon. It's not a lot of fun for us, either."

Rich said Frederick Ruckman, vice president of Illinois-American, is suing the ICC with the intention.

"He swore and there are no service proximity, when he should have known that O'Fallon had a 12-inch water main within inches of the city," Rich said. "We distort the picture of this area is located within one-half miles of corporate boundaries of O'Fallon when he knows the city is completely surrounded by O'Fallon."

Mackin said the credibility of an Illinois-American is matter.

"I can assure you word in Mr. Ruckman's money is based on the fact we know them," Mackin said.

Caseyville's plans

O'Fallon's water also serves most of Caseyville Heights. The other water company serving Caseyville is Caseyville's, where so are checking in native to Illinois-American.

"The way the keep jumping, it's not do it sometime or

"We do everything we can to hold down costs while reinvesting in our water system."

Terry Mackin
Illinois-American spokesman

1 Park opens on ruins of former coal mine

path, lake, picnic

Alderman Dennis Renner got about half way before he changed his mind.

Mayor Gary Graham hitched a ride on a motorized cart.

State Rep. Jay Hoffman, D-Collinsville, made it with a limp. He said he hurt his leg a few weeks ago prepar-

ing for a marathon he wanted to run in Chicago.

But they were all happy that the 81-acre park has become a reality after 10 years of struggle.

Hoffman reminisced about the blowing coal dust that covered the homes and cars of nearby residents when the mine was left unattended.

"It's been a long time to

make this useful," Hoffman said. "This is a real cry from the problems that existed in the late 80s."

The park features a walking path, a lake, picnic tables, a covered pavilion, restrooms and paths around and up the grass-covered mound of coal refuse to a wooden lookout platform.

"It's a good use of what was a really bad situation,"

Alderman Mike Bennett said.

Ken Hise of the St. Clair County intergovernmental grants department said the Illinois Department of Natural Resources promised to contribute \$20,000 for trees for the park.

County Board Member Ken Sharkey said he hopes more money can be secured to add features to improve

the park.

The park's 35-acre, privately owned lake swimming with catfish, bluegill and crappie will remain closed to the public until the city and county settle a dispute over its maintenance.

"We have a beautiful amenity of a lake, but the city has to decide what to do with it," Sharkey said.



"It's been a long time to make this useful."

State Rep. Jay Hoffman
D-Collinsville

County court available online

essed 24 hours a day

People still will have to come to court for their cases, Melucci said, but accessing the information from the Internet can save people from making extra trips or phone calls to the office. It also cuts down the amount of time they have to spend at the courthouse filling out forms.

"The site allows you to download the forms and instructions, and complete the papers needed to file your case," he said. "Our

FOCUS: Caseyville wants to dig its own wells. O'Fallon wants to buy it from St. Louis. These cities are angered by Illinois-American and ...

The high cost of water

